

NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD

FIELD BORDER

(Feet)
Code 386



DEFINITION

A strip of permanent vegetation established at the edge or around the perimeter of a field.

PURPOSES

- Reduce erosion from wind and water
- Soil and water quality protection
- Management of harmful insect populations
- Provide wildlife food and cover
- Increase carbon storage in biomass and soils
- Improve air quality

CONDITIONS WHERE PRACTICE APPLIES

This practice may be applied as a stand alone practice or a part of a conservation system.

At the edges of cropland fields and to connect other buffer practices within the field. May also apply to recreation land or other land uses where agronomic crops are grown.

CRITERIA

General Criteria Applicable To All Purposes

All federal, state and local laws, rules and regulations will be followed. Minimum field border widths shall be 12 feet where the contributing field is less than 2% slope, and 20 feet where the contributing area is greater than 2%.

The field borders will be established to adapted species of permanent grass, legumes, and/or shrubs.

Field borders will be established around the field edges to the extent needed to meet the resource needs and producer objectives.

Plant material, seedbed preparation, seeding rates, dates, depths, and planting methods will be consistent with the varieties selected.

Ephemeral gullies and rills present in the planned border area will be smoothed as part of seedbed preparation.

Impacts to cultural resources and Federal and State protected species shall be evaluated during planning, design and implementation of this conservation practice in accord with established National and Florida NRCS policies (General Manual, Title 420-Part 401 and Title 190-Part 410.22; National Planning Procedures Handbook, FL Supplements to Parts 600.1 and 600.5).

Additional Criteria To Reduce Erosion From Wind And Water

Wind Erosion Reduction. Locate borders around the entire perimeter of the field, or as a minimum, provide a stable area on the upwind edge of the field as determined by prevailing wind direction data.

Plant stiff-stemmed, upright grasses to trap saltating soil particles.

Minimum height of grass shall be one foot during the critical erosion period.

Water Erosion Reduction. Locate borders around entire perimeter of the field, or as a minimum, install borders to eliminate sloping end rows, headlands, and other areas where concentrated water flows will enter or exit the field.

Additional Criteria To Protect Soil And Water Quality

Reducing Runoff and Increasing Infiltration. Locate borders around entire perimeter of the field, or as a minimum, install borders to eliminate sloping end rows, headlands and other areas where concentrated water flows will enter or exit the field.

Maintaining Field Setback Distances For Manure and Chemical Applications. Border widths will be designed to conform to minimum field application setback widths established by NRCS conservation practices Nutrient Management, Code 590 and Pest Management, Code 595.

Sediment Trapping. Locate borders around the entire perimeter of the field, or as a minimum, in areas where runoff enters or leaves the field.

Reducing Soil Compaction from Equipment Parking and Traffic. Border widths will be designed to accommodate equipment parking, loading/unloading equipment, grain harvest operations, etc.

Additional Criteria For Management Of Harmful Insect Populations.

Provide a Harbor for Beneficial Insects. Include herbaceous plants that attract beneficial insects. See planning considerations for including shrubs.

Mowing, harvesting, and pesticide applications will be scheduled to accommodate life cycle requirements of the beneficial insects.

or

Provide a Habitat to Cause Pest Insects to Congregate. Select plants for the field border that attract pest insects.

Use mechanical, cultural, and/or chemical techniques to reduce pest populations when and where they congregate in the field border.

Additional Criteria To Provide Wildlife Food And Cover

Establish plants that provide wildlife food and cover for the target wildlife species shall be used.

Mowing, harvest, and weed control activities within the field border will be scheduled to accommodate reproduction and other requirements of target wildlife species.

Where the border has the primary purpose for wildlife, follow NRCS conservation practice standard Wildlife Upland Habitat Management, Code 644.

Additional Criteria to Improve Air Quality

Establish plant species with foliar and structural characteristics that optimize interception adsorption and absorption of airborne particulates.

Orient shrub rows will be oriented as closely as possible to perpendicular to the prevailing wind direction during the period of concern

Additional Criteria for Increasing Carbon Storage in Biomass and Sequestration in the Soil

Maximize width and length of the herbaceous border to fit the site.

Establish plant species that will produce the greatest above and below ground biomass production for the soil and site.

CONSIDERATIONS

Field borders are more effective and provide more environmental benefits when planted around the entire field.

Field borders enhance the aesthetics and provide stability around the field edge. They also provide turn and travel areas for equipment and reduce airborne dust.

To increase trapping efficiency, consider establishing a narrow strip of stiff-stemmed upright grass at the crop/field border interface.

Field borders can be used to comply with required field setback distances applicable to manure and chemical applications.

Wildlife enhancement and other benefits of native plants should be discussed during planning.

Native species should be used when feasible and meet producer objectives.

Consider overseeding the border with legumes for plant diversity and wildlife benefits.

Schedule mowing, harvesting, and weed control to accommodate wildlife nesting needs and other special requirements or purposes.

Waterbars or berms may be needed to breakup or redirect concentrated water flows within the borders.

If bank stabilization is a concern, select fibrous deep-rooted plants.

Consider plants tolerant to sediment deposition and chemicals planned for application.

Rows of shrubs (NRCS conservation practice standard, Windbreak/Shelterbelt Establishment, Code 380) adjacent to field borders will often enhance field borders ability to harbor beneficial insects, and may also provide additional wildlife benefits.

Consider using plant species that enhance the biomass collection opportunities.

Consider increasing the width of the field border will increase the potential for carbon sequestration.

PLANS AND SPECIFICATIONS

Plans and specifications are to be prepared for the practice site. The following items should be specified. A job sheet is available to document these items:

- Border widths and lengths based on local design criteria
- Location within the field or farm boundary
- Vegetation to be used
- Site preparation
- Planting method
- Liming or fertilizer requirements
- Operation and maintenance requirements

OPERATION AND MAINTENANCE

Field borders require careful management and maintenance for performance and longevity.

The following O & M will be planned to be applied as needed:

- Storm damage repair.
- Sediment removal - when 6 inches of sediment have accumulated at the field border/cropland interface.
- Shut off sprayers and raise tillage equipment to avoid damage to field borders.
- Shaping and reseeding border areas damaged by chemicals, tillage or equipment traffic.
- Fertilize, mow, harvest, and control noxious weeds to maintain plant vigor.
- Ephemeral gullies and rills that develop in the border will be filled and reseeded.

Maintain herbaceous vegetation so that it provides at least 80% ground cover throughout the year

REFERENCES

NRCS Conservation Practice Standards

Nutrient Management, Code 590

Pest Management, Code 595

Wildlife Wetland Habitat Management, Code 644

Windbreak/Shelterbelt Establishment, Code 380